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10/677,362	10/03/2003	Heng Qiu	243516US8	9806

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EXAMINER	
HO, CHUONG T	
ART UNIT	**PAPER NUMBER**
2619	
NOTIFICATION DATE	**DELIVERY MODE**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	**Application No.** 10/677,362	**Applicant(s)** QIU ET AL.	
	Examiner CHUONG T. HO	**Art Unit** 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-10 and 12-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,3-6,8,10 and 15-22* is/are allowed.

6)☒ Claim(s) *2,9 and 12-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1, 3, 2, 4-6, 10, 8, 9, 12, 14, 13, 15, 16, 19, 17, 20, 18, 21-22 .

DETAILED ACTION

1. The amendment filed 03/11/08 have been entered and made of record.

2. Applicant's arguments with respect to claims 1, 3, 2, 4-6, 10, 8, 9, 12, 14, 13, 15, 16, 19, 17, 20, 18, 21-22 have been considered but are moot in view of the new ground(s) of rejection.

3. Claims 1, 3, 2, 4-6, 10, 8, 9, 12, 14, 13, 15, 16, 19, 17, 20, 18, 21-22 are pending.

Information Disclosure Statement

4. The information disclosure statement (IDS) submitted on 03/11/08 was filed after the mailing date of the Non Final Rejection on 11/16/07. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 9, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlborg et al. (2003/0078050 A1) in view of Atarashi (Patent No.: 7,298,721).

Regarding to claim 2. Carlborg et al. discloses a resource allocating method in a radio packet communication system for transmission and reception of packet data by code division multiplexing between a base station and a mobile station, in which the mobile station transmits a reservation signal including priority level information indicating a priority of the packet data (page 2 [0016] the reservation resource request 122 includes priority data associated with a plurality of air interface resource reservation parameters) to the base station and in which the base station allocation a necessary resource to communication with the mobile station on the basis of the reservation signal transmitted from the mobile station ([0020], the call back notification 126 may be sent at some time prior to the actual call initiation by the remote wireless unit 102 to notify the remote wireless unit 102 that the reserved time is, for example, five minutes away, or one minute away, or any other suitable time).

However, Carlborg et al. are silent to disclosing the base station designates a spreading code to be allocated to the mobile station, for each said reservation signal, based on the priority level information in said reservation signal and indicating the priority of the packet data.

Atarashi discloses the base station designates a spreading code to be allocated to the mobile station, for each said reservation signal based on the priority level information in said reservation signal and indicating the priority of the packet data (col. 14, lines 50-53, when one time slot and one spreading code are assigned, the mobile station uses the assigned spreading code and the time slot with priority) (col. 14, lines 42-43, only the mobile station which was assigned the time and the spreading code can transmit by spreading the packet using the assigned spreading code in the assigned time slot).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a spreading code to be allocated to the mobile station is designated for each said reserved signal taught by Atarashi into the system of Carlborg . One would have been motivated to do so to allow the number of users or the variation of services in timeslots.

1. As to claim 9, claim 9 is rejected the same reasons of claim 2 above.
2. As to claim 13, claim 13 is rejected the same reasons of claim 2 above.

3. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carlborg et al. (2003/0078050 A1) in view of Ubiki et al. (7,054,655 B2)

As to claim 12, Carlborg et al. disclose a mobile station for, using a resource allocated by a base station, performing transmission and reception of packet data by code division multiplexing to and from the base station, the mobile station comprising: reservation signal transmitting means for transmitting to the base station a reservation signal ([0020], the call back notification 126 may be sent at some time prior to the actual call initiation by the remote wireless unit 102 to notify the remote wireless unit 102 that the reserved time is, for example, five minutes away, or one minute away, or any other suitable time); in which the mobile station transmits a reservation signal including priority level information indicating a priority of the packet data (page 2 [0016] the reservation resource request 122 includes priority data associated with a plurality of air interface resource reservation parameters) to the base station.

However, Carlborg et al. are silent to disclosing a transmission rate changing unit configured to change a transmission rate according to resource set based on the maximum transmit power information, the priority level information, and the transmit power information in the reservation signal transmitted by the reservation signal transmitting unit.

Ubiki et al. disclose a transmission rate changing unit configured to change a transmission rate according to resource set based on the maximum transmit power information, the priority level information, and the transmit power information in the reservation signal transmitted by the reservation signal transmitting unit (col. 2, lines 17-18, there has been a case in which the transmission power of the base station apparatus is near the maximum total transmission power value, as the transmission power is increased in a simple manner in order to secure the communication quality when there is an instruction from a communication terminal to increase the transmission power) (col. 2, lines 50-51 transmitting the signals at transmission rates which are controlled for each communication terminal, based on the allowable transmission power values) (col. 13, lines 1-5, the priority information is set according to conditions such as QoS (Quality of Service) of users, the kind of service, and a data transfer method at the layers 2. As one example, when two levels of High and Low are adopted as the priority information, the allowable transmission-power-values are assumed to be variable only for users with the High-level priority information, and there is no change in the allowable transmission-power-values for users with the Low-level priority information, even when requests to change the allowable transmission-power-values are notified from the total-transmission-power comparison section 152. Moreover, for example, the changes in the allowable transmission-power-values are set according to the priority, when there are a plurality of ranks in the priority).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a transmission rate changing unit configured to change a transmission rate according to resource set based on the maximum transmit power information, the priority level information, and the transmit power information in the reservation signal transmitted by the reservation signal transmitting unit taught by Ubiki into the system of Carlborg. One would have motivated to do so to allow to control the transmission power and transmission bit rate between the base station and mobile station.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combined system (Carlborg – Ubiki) in view of Atarashi (Patent No.: 7,298,721)..

As to claim 14 , the combined system (Carlborg – Ubiki) disclose the limitations of claim 1 above.

However, the combined system (Carlborg – Ubiki) are silent to disclosing a spreading code to be allocated to the mobile station is designated for each said reserved signal.

Atarashi discloses a spreading code to be allocated to the mobile station is designated for each said reserved signal (col. 14, lines 50-53, when one time slot and one spreading code are assigned, the mobile station uses the assigned spreading code and the time slot with priority) (col. 14, lines 42-43, only the mobile station which was assigned the time and the spreading code can transmit by spreading the packet using the assigned spreading code in the assigned time slot).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a spreading code to be allocated to the mobile station is designated for each said reserved signal taught by Atarashi into the combined system (Carlborg – Ubiki). One would have been motivated to do so to allow the number of users or the variation of services in timeslots.

Allowable Subject Matter

5. Claims 1, 3-6, 8, 10, 15-22 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 is allowed. The prior art (6804227) discloses the reserved time length setting step sets a start time (figure 7B, Ts0) or reserved time corresponding to a first terminal in the figure 7B to be earlier than a start time (Ts1) of a reserved time corresponding to the second terminal (col. 6, lines 10-18). The prior art however fails to disclose the reserved time length setting step sets a start time of a reserved time corresponding to a low priority in the priority level information to be earlier than a start time of a reserved time corresponding to a high priority in the priority level information.

7. The following is a statement of reasons for the indication of allowable subject matter: Claim 4 is allowed. The prior art (6804227) discloses the reserved time length setting step sets a start time (figure 7B, Ts0) or reserved time corresponding to a first terminal in the figure 7B to be earlier than a start time (Ts1) of a reserved time corresponding to the second terminal (col. 6, lines 10-18). The prior art however fails to disclose the reserved time length setting step sets a start time of a reserved time corresponding to a low priority in the priority level information to be earlier than a start time of a reserved time corresponding to a high priority in the priority level information.

8. The following is a statement of reasons for the indication of allowable subject matter: Claim 15 is allowed. The prior art (6804227) discloses the reserved time length setting step sets a start time (figure 7B, Ts0) or reserved time corresponding to a first terminal in the figure 7B to be earlier than a start time (Ts1) of a reserved time corresponding to the second terminal (col. 6, lines 10-18). The prior art however fails to disclose the reserved time length setting step sets a start time of a reserved time corresponding to a low priority in the priority level information to be earlier than a start time of a reserved time corresponding to a high priority in the priority level information.

9. The following is an examiner’s statement of reasons for allowance: the prior art (20030078050) of record does not appear to teach or render obvious the claimed limitations with the specific added limitations, as recited from independent claim 8: “propagation loss calculating means for calculating a propagation loss in transmission of a packet from the mobile station, based on the transmit power information in the reservation signal received by the reservation signal receiving means and information

about a received power in reception of the reservation signal by the reservation signal receiving means; maximum received power calculating means for calculating a maximum received power of a signal received from the mobile station, based on the maximum transmit power information in the reservation signal and the propagation loss calculated by the propagation loss calculating means; maximum transmission rate calculating means for calculating a maximum transmission rate allocable to the mobile station, based on the maximum received power calculated by the maximum received power calculating means; and resource allocating means for allocating a resource to the mobile station, based on the maximum transmission rate calculated by the maximum transmission rate calculating means".

10. The following is a statement of reasons for the indication of allowable subject matter: Claims 16, 17, 18 are allowed. Carlborg et al. discloses a resource allocating system in a radio packet communication system for transmission and reception of packet data between a base station (figure 1, 104) and a mobile station (figure 1, 102), in which the base station (figure 1, 104) allocates a necessary resource ([0015], air interface reservation parameters (e.g., user / bits 115)) ([0037], resource reservation request and response) to communication with the mobile station (figure 1, 102), the resource allocation system comprising: A reservation signal transmitting step wherein the mobile station (figure 1, 102) transmits a reservation signal ([0011], reservation resource request) containing priority level information (priority data associated with a plurality of air interface resource reservation parameters, and user identification data) about a priority level of communication to let the base station receive the reservation

signal ([0011], reservation resource request); A reserved time length ([0020], the call back notification 126 may be sent at some time prior to the actual call initiation by the remote wireless unit 102 to notify the remote wireless unit 102 that the reserved time is, for example, five minutes away, or one minute away, or any other suitable time) in the reservation signal transmitted in the reservation signal transmitting step, the base station (figure 1, 104) sets a length of a reserved time for allocation of a resource, as a reserved time length ([0032], reservation time, [0033] reserved time);

there is a resource available for allocation in reserved time region defined by the reserved time length set in the reserved time length setting step, from a predetermined reservation start time, the base station reserves allocation of a resource for the communication with the mobile station having transmitted the reserved signal ([0012], the wireless network element receives the air interface resource reservation request to determine whether an air interface resource is available for the user at a defined future time and generates an air interface resource reservation response indicating whether the desired resource will be available for the remote wireless unit).

Takihiro discloses wherein said first reserved time region is a region that is set from predetermined reservation start time and said first reserved time includes the second reserved time region (figure 2, reservation priority level 518, figure 9, a reserved communication time for priority level 1 "priority" , a reserved communication time for priority level 2 "non priority") (col. 2, lines 66-67, col. 3, lines 18-32, lines 65-67, col. 8, line 50, col. 11, lines 23-30).

Cain (U.S.Patent No. 6,982,987 B2) discloses a reserved time region setting step wherein, when the priority level information in the reservation signal transmitted in the reservation signal transmittal step, indicates a high priority level, the base station sets a first reserved time region including a first reserved time length based on said high priority level, and a resource allocation reserving step when the base station receives the reservation signal indicating the high priority level and when there is a resource available for allocation in the first reserved time region, the base station reserves allocation of the resource in the first reserved time region for the communication with the mobile station having transmitted the reservation signal, and when the base station receives the reservation signal indicating the low priority level and when there is a resource available in the second reserved time region, the base station reserves allocation of the resource in said second reserved time region for the communication with the mobile station having transmitted the reservation signal (col. 7, lines 13-15, prioritization of the communication links will be addressed in greater detail below. In addition, the controller 18 may also prioritize the communication links and schedule the at least one available time slot based upon this prioritization) (col. 39, lines 22-25, the level of demand for a given communication link during a time slot may be further segmented into the amount of expected demand for several priority class of traffic. This enables more effective allocation of time slots to meet the demand of prioritized traffic) (col.39, lines 36-37, if the traffic is prioritized into p priority classes in order of priority from lowest to highest, P1, P2, P3 ,…., PN, then the time slot demand for priority class

Pj is) (col. 40, lines 26-28, the estimated demand for all priority classes and the number of allocated slots).

The prior art (Cain "U.S.Patent No. 6,982,987 B2") however fails to disclose when said priority level information indicates a low priority level lower than said high priority level, the base station sets a second reserved time region including a second reserved time length that is shorter than said first reserved time length.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EDAN ORGAD can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

04/26/08
/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2619